Gases:

$\frac{P_1V_1}{T_1} = \frac{P_2V_2}{T_2}$ $\quad n = \frac{V}{V} \Rightarrow V \rightarrow 22.4$

$PV = nRT$ $\quad n = \frac{m}{M}$

P2

Gas Problems.

$n = \frac{V}{V}$ $\quad \frac{P_1V_1}{T_1} = \frac{P_2V_2}{T_2}$ $\quad PV = nRT$

$\frac{m}{M} = \frac{V}{V}$ $\quad \frac{P_1}{P_2} = \frac{T_1}{T_2}$ $\quad \frac{V_1}{V_2} = \frac{T_1}{T_2}$ $\quad P_1V_1 = P_2V_2$

concentration / Emp + molecular formula / VSEPR

$C = \frac{n}{V}$ concentration formula

P2

$V_1C_1 = V_2C_2$ = volume / concentration

$n = \frac{m}{M}$ formula for moles

Emperical formula -> % to mass, Mass to moles, divide by small, multiply until whole.

Molecular formula -> divide molar mass of ~~empevical formula~~ of molecular formula (given) by M of emperical formula. Multiply E formula by the answer.

Concentration Calculations

$C = n/V$ mol/L $\quad$ mL -> L ÷ 1000

$n = m/M$

$V_1C_1 = V_2C_2$

Formula List

Sealed Flask

$n = \frac{m}{M}$ $\quad n = \frac{\#\text{ particles}}{\text{avogadros \#}} \rightarrow 6.02 \times 10^{23}$

Mass of ___ = mol of comp. × mol of element × mol mass of element

Mol of ___ = mol of comp. × mol of element

# of atoms of ___ = mol of comp. × mol of element × avogadro's #

total # of atoms = mol of comp. × total mols × avogadro's #

1S 2P 2D 2F
1S 2P 2D 2F
1S 2P 2D 2F
1S 2P 2D
1S 2P
1S

electron configuration

P2

# of element = how much it is in the compound you are using.

Sealed Flask

# of substance = all the # of elements added

b) mol of substance × # of element × M of single element = mass of element

c) mol of substance × # of element = mol of element

d) mol of substance × # of element × 6.02×10^{23} = # of atoms in element.

e) mol of substance × # of substance × 6.02×10^{23}

P2